

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application

Inventor: Jon S. Martens et al.

Appl. No.: New Application

Filed: August 15, 2003

Title: Flexible Vector Network Analyzer Measurements  
and Calibrations

PATENT APPLICATION

Art Unit: New Application

Examiner: New Application

Customer No. 23910

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. §1.56

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

It is requested that the information identified in this statement be considered by the Examiner and made of record in the above-identified application. This statement is not intended to represent that a search has been made or that the information cited in the statement is, or is considered to be, material to patentability as defined in 37 C.F.R. §1.56. If this is a continuation, divisional or continuation-in-part application, it is understood that the Examiner will consider all information which was considered by the Office in a parent application. MPEP §609. Such information therefore is not listed herein unless it is desired that the information be printed on a patent issuing from the subject application.

*Enclosed with this statement are the following:*

- ☒ Form PTO-1449. The Examiner is requested to initial the form and return it to the undersigned in accordance with M.P.E.P. §609.
- ☒ The present application is being/was filed after June 30, 2003. In accordance with the pre-Official Gazette waiver of 37 CFR 1.98 (a)(2)(i) posted at <http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/idswouscopies.htm>, copies of cited U.S. patents are not enclosed. However, copies of cited foreign patent documents and non-patent literature are enclosed in accordance with 37 CFR 1.98(a)(2), as still required.
- ☐ *PTA Statement under 37 C.F.R. §1.704(d).* Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the information disclosure statement.

*This statement should be considered because:*

- ☒ **37 C.F.R. §1.97(b).** This statement qualifies under 37 C.F.R. §1.97, subsection (b) because:

- (1) It is being filed within three months of the filing date of an application other than a continued prosecution application under § 1.53(d);  
-- OR --
- (2) It is being filed within 3 months of entry of a national stage;  
-- OR --
- (3) It is being filed before the mailing date of the first Office Action on the merits,  
-- OR --
- (4) It is being filed before the mailing date of the first Office Action after the filing of a Request for Continued Examination under 37 C.F.R. §1.114.

✓ **Fee Authorization.** The Commissioner is hereby authorized to charge underpayment of any additional fees or credit any overpayment associated with this communication to Deposit Account No. 06-1325.

Respectfully submitted,

Date: 8/15/03

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Form PTO-1449 (Substitute)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		Attorney Docket Number ANRI-08064US1		Application Number New Application	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(Use several sheets if necessary)</i>				Applicant Jon S. Martens et al.			
				Filing Date August 15, 2003		Group Art Unit New Application	
<b>U.S. PATENTS</b>							
Examiner Initial		Patent Number	Issue Date	First Named Inventor	Class	Subclass	Filing Date
	1	5,578,932 A	11/26/96	Adamian			06/07/95
	2	5,748,506 A	05/05/98	Bockelman			05/28/96
	3	6,188,968 A	02/13/01	Blackham			05/18/98
	4	6,300,775 A	10/09/01	Peach, et al.			02/02/99

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)		
5	Anritsu Model 360B Vector Network Analyzer, Operation Manual, Revision F, Chapters 3, 4, 5, 6, 7, 8 and 9, Pages 3-4 to 9-46, October 1997	
6	Anritsu Application Note, Reflectometer Measurements - Revisited, Rev. C, 12 pages, April 2000,	
7	Bauer, R.F. et al., "De-Embedding and Unterminating," IEEE Transactions of Microwave Theory and Technique, Vol. MTT-22, No. 3, Pages 282- 288, March 1974	
8	Daywitt, W.C., "Determining Adapter Efficiency by Envelope Averaging Swept Frequency Reflection Data," IEEE Transactions on Microwave Theory and Techniques, Vol. 38, No. 11, Pages 1748 - 1752, November 1990	
9	Eberly, Mike et al., "Intro to the Agilent 8714 - RF Network Analyzer," Agilent Technologies, EducatorsCorner.com, Experiments, 7 pages, Date Unknown	
10	Edwards, M.L., "Calibration and Measurements of S-Parameters," <u>Microwave &amp; RF Circuits: Analysis, Design, Fabrication &amp; Measurement</u> , Chapter 7, 23 pages, September 2001	
11	Fay, P. "Error Correction For Network Analysis - Lab #5," Microwave Circuit Design and Measurements Lab, EE 458/558, 3 pages, Revised 9/2001	
12	Glasser, L.A., "An Analysis of Microwave De-embedding Errors," IEEE Transactions on Microwave Theory and Techniques, Vol. MTT-26, No. 5, Pages 379 - 380, May 1978	
13	Gonzalez, G., <u>Microwave Transistor Amplifiers, Analysis and Design</u> , Prentice-Hall, Inc., New Jersey, Chapters 1 and 2, Pages 1 - 90, August 1996	
14	King, J.D. et al., "Direct Characterization of Non-Insertable Microwave Test Fixtures For Packaged MMICs," in 57 <sup>th</sup> ARFTG Conf. Digest, pp. 19-27, May 2001	
15	Matthew, P.J. et al., "RF Impedance Measurement Calibration," <a href="http://www.aps.anl.gov/techpub/lsnotes/ls223/ls223.html">http://www.aps.anl.gov/techpub/lsnotes/ls223/ls223.html</a> , 16 pages, February 12, 1993	

OTHER DOCUMENTS (Include author (if any), title, publisher and place of publication, date and pertinent pages)		
16	Nelson, R., "What are S-parameters, anyway?," Test & Measurement World, <a href="http://www.tmworld.com/articles/2001/02_sparameters.htm">http://www.tmworld.com/articles/2001/02_sparameters.htm</a> , 9 pages, February 2001	
17	"Network Analyser Calibration," <a href="http://www.morph.demon.co.uk/Electronics/new.htm">http://www.morph.demon.co.uk/Electronics/new.htm</a> , 12 pages, visited November 13, 2001	
18	Pollard, R.D. et al., "The Calibration Of A Universal Test Fixture," 1983 MIT-S Digest, Pages 498 - 500 (year of publication is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the particular month of publication is not at issue, in accordance with MPEP §609.III.A.)	
19	Product Note, Aglient 8510-13, "Measuring Noninsertable Devices," Agilent Technologies, 15 pages, August 1988	
20	Randa, J. et al., "Comparison of Adapter Characterization Methods," IEEE Transactions on Microwave Theory and Techniques, Vol. 47, pp. 2613-2620, December 1999	
21	Silvonen, K., "Calibration and De-Embedding of Microwave Measurements Using Any Combination of One-or Two-Port Standards, Circuit Theory Laboratory CT-4, Helsinki University of Technology, 28 pages, December 1987	
22	Tippet, J.C. et al., "A Rigorous Technique for Measuring the Scattering Matrix of a Multiport Device with a 2-Port Network Analyzer," IEEE Transactions on Microwave Theory and Techniques, Vol. MTT-30, No. 5, pp. 661-666, May 1992	
23	Vaitkus, R. et al., "A Two-Tier Deembedding Technique For Packaged Transistors," 1982 IEEE MTT-S Digest, Pages 328-330 (year of publication is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the particular month of publication is not at issue, in accordance with MPEP §609.III.A.)	
24	Wiatr, W., "A Method for Embedding Network Characterization with Application to Low-Loss Measurements," IEEE Transactions on Instruments and Measurement, Vol. IM-36, No. 2, pp. 487-490, June 1987	
25	Williams, D.F. et al., "In-Line Multiport Calibration Algorithm," in 51st ARFTG Conf. Digest, pp. 88-90, June 12, 1998	
26	Wiltron/Anritsu Company, Documentation for the 360B and 37xxx Network Analyzers, pp. 8-34 to 8-38, Date Unknown	
27	Ferrero, A. "A Simplified Algorithm for Leakey Network Analyzer Calibration," IEEE Microwave and Guided Wave Letters, Vol. 5, No. 4, pp. 119-121, April 1995	
28	Speciale, Ross A., "A Generalization of TSD Network-Analyzer Calibration Procedure, Covering $n$ -Port Scattering-Parameter Measurements, Affected by Leakage Errors," IEEE Transactions on Microwave and Techniques, Vol. MIT-25, No. 12, pp. 1100-1115, December 1977	
Examiner		Date Considered
<p>*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>		
<p>*1 = Copy not submitted because it was submitted in prior application SN _____, filed _____, 20____, relied on under 35 USC §120.          *2 = Copy not submitted because it was submitted in prior application SN _____, filed _____, 20____, relied on under 35 USC §120.</p>		